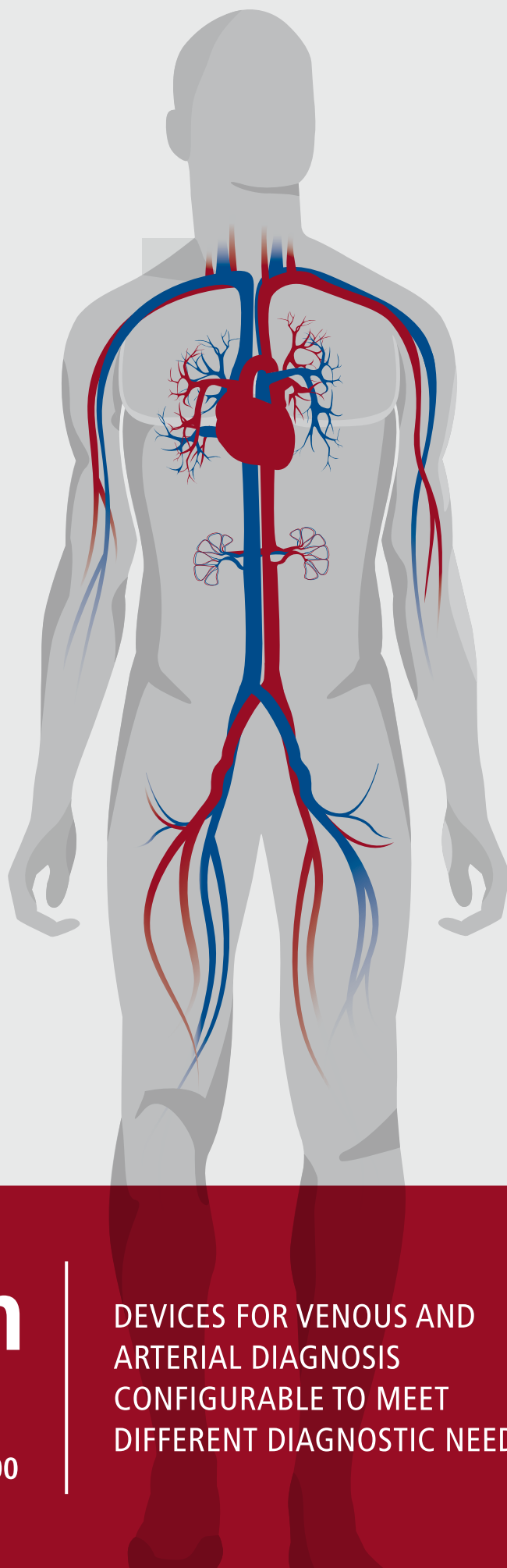
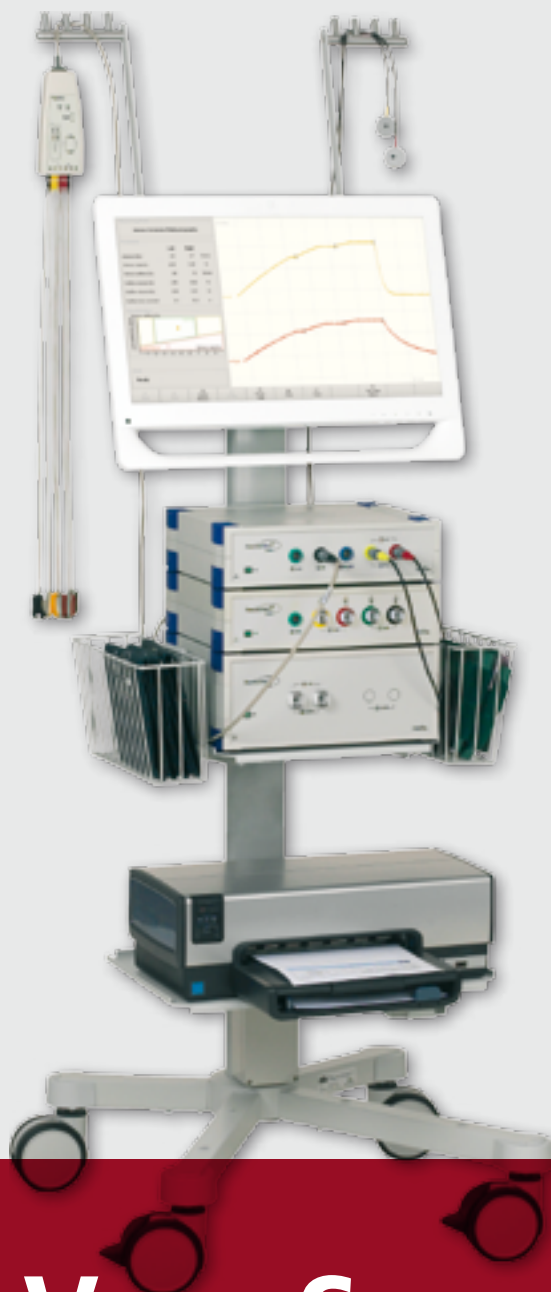


VASCULAR DIAGNOSTIC SYSTEM



VasoScreen PRODUCT LINE

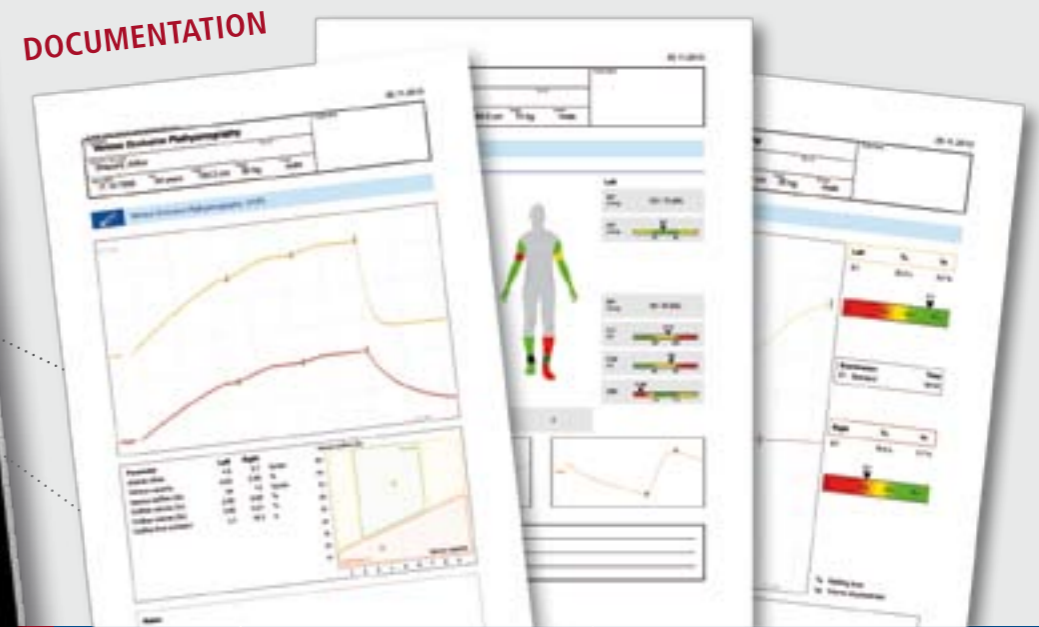
VasoScreen® 5000 · 4000 · 2000 · 1000

DEVICES FOR VENOUS AND
ARTERIAL DIAGNOSIS
CONFIGURABLE TO MEET
DIFFERENT DIAGNOSTIC NEEDS

medis.

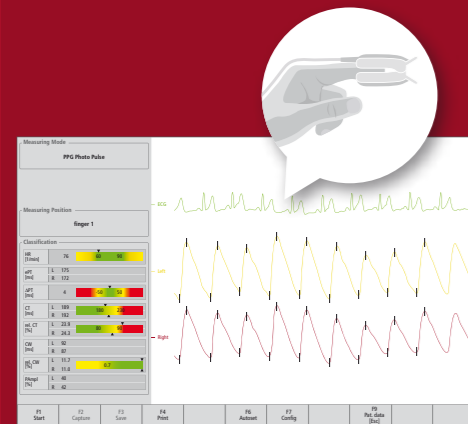
FLEXIBLE · EASY · TIME SAVING · FUTURE-ORIENTED

- Device configuration according to diagnostic needs
- All examinations are automatically controlled and evaluated
- Simultaneous measurements can be taken on both sides of the body
- Common user interface for all devices and examinations
- System can be operated by touch screen, keyboard or mouse
- Patient data base and different interfaces (GDT, PDF) are available
- The software-based system can be constantly updated to current standard



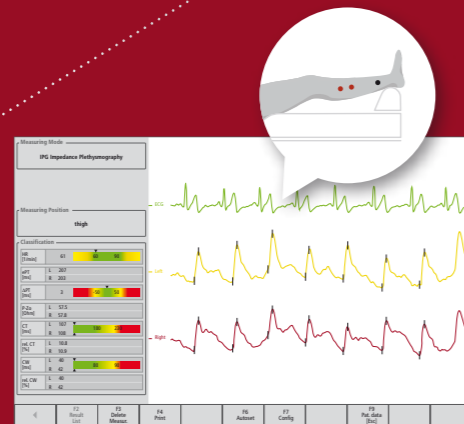
MEASURING AND RESULT SCREENS

ARTERIAL DIAGNOSIS



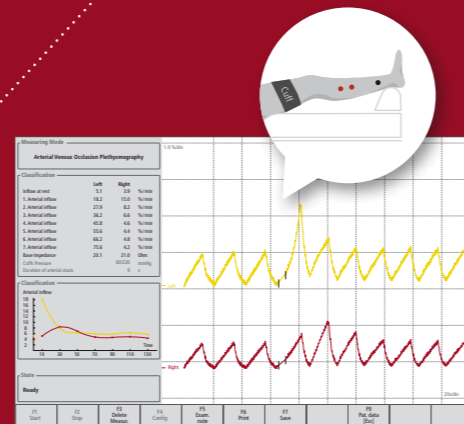
PPG
PHOTO-PLETHYSMOGRAPHY

for pulse wave analysis in fingers and toes to diagnose peripheral circulatory disturbances with regard to functional (Raynaud) or organic origin



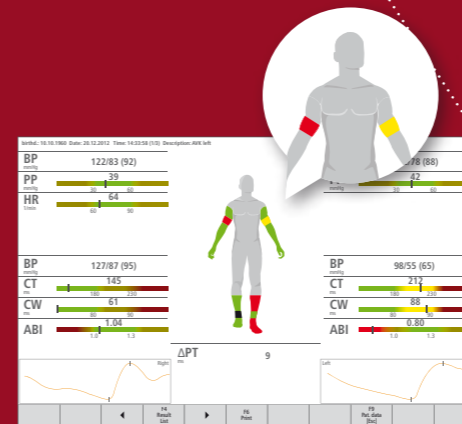
IPG
IMPEDANCE-PLETHYSMOGRAPHY

for pulse wave analysis in legs, arms and head to diagnose arteriosclerotic changes, stenoses or occlusions



ARTERIAL VOP
ARTERIAL VENOUS-OCCLUSION
PLETHYSMOGRAPHY

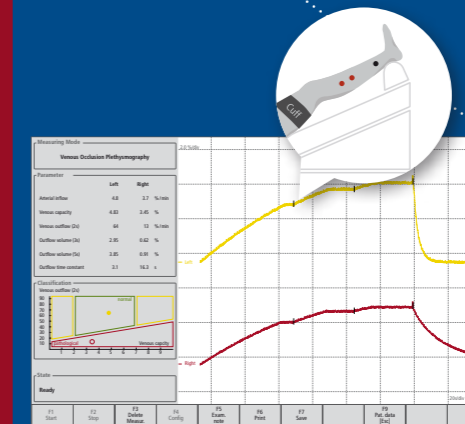
for measuring arterial inflow in the legs after complete occlusion (reactive hyperemia) to diagnose the severity of a peripheral arterial occlusive disease



ABI
ANKLE-BRACHIAL-INDEX

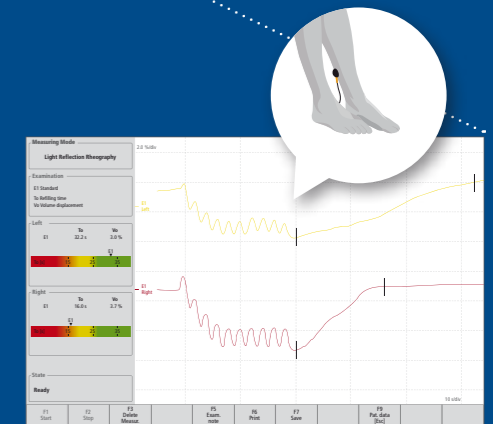
for the measurement of peripheral blood pressure to diagnose peripheral arterial occlusive diseases

VENOUS DIAGNOSIS



VOP
VENOUS-OCCLUSION-PLETHYSMOGRAPHY

for the measurement of venous capacity and venous outflow to diagnose deep vein thromboses or other outflow disturbances and to evaluate their haemodynamic severity



LRR (D-PPG)
LIGHT-REFLECTION RHEOGRAPHY

for measuring venous pump volume and refilling time to diagnose the function of venous valves and effectiveness of the venous muscle pump

METHODS

The absorption of infrared light by fingers or toes is determined and changes, depending on the arterial blood volume, are registered.

The electrical impedance of a body segment is measured and the changes in impedance, related to the blood volume in the segment, are shown. For this purpose 4 standard electrodes are attached and a very low voltage, high frequency current is applied.

Pressure cuffs are placed on the thighs and a complete arterial occlusion is made (about 3 min). Afterwards the cuffs are emptied and a pressure of about 80 mmHg is applied to measure the arterial inflow 5-7 times. The blood volume changes are measured using IPG.





Cuffs are placed on the upper arms and the ankles and the blood pressures are measured simultaneously using an oscillometric measuring method. Additionally, wave form parameters are analysed.

Pressure cuffs are placed on the thighs and a pressure of about 80 mmHg is applied to make a venous occlusion and to measure venous capacity. After the veins are filled the cuffs are emptied to determine venous outflow. The blood volume changes are measured using IPG.

The absorption of infrared light in the skin of the lower legs is measured. Changes, dependant on the venous blood volume in the surface veins, reflect the processes in the deeper veins.

TECHNICAL DATA

VasoScreen® 5000 VasoScreen® 1000 VasoScreen® 2000

Measuring Channels		ECG · IPG · Phlebodynamometry · LRR · PPG · configurable	IPG	ECG · Pulse-Oscillometry	 5000 ECG · IPG · PPG · LRR
Electro-Cardiography (ECG)	Channels	1		1	 4000 VOP (Pneumatic Module)
	Input voltage	+/- 10 mV AC		+/- 10 mV AC	
	Frequency range	0.2–120 Hz		0.2–120 Hz	
Impedance Plethysmography (IPG)	Channels	2	2		 2000 ABI
	Method	4 electrode application	4 electrode application		
	Measuring current	< 1.5 mA eff, 85 kHz sinus	< 1.5 mA eff, 85 kHz sinus		
	Basic impedance	0–200 Ohms, 0–1.5 Hz	0–200 Ohms, 0–1.5 Hz		
	Impedance change	± 6.25 Ohms, 0–1.5 Hz	± 6.25 Ohms, 0–1.5 Hz		
	Pulse wave	± 0.5 Ohms, 0.2–120 Hz	± 0.5 Ohms, 0.2–120 Hz		
	Noise	< 1 mOhm	< 1 mOhm		
Application	legs, arms, head	legs, arms, head			
Light-Reflection Rheography (LRR / D-PPG)	Channels	2			 1000 IPG
	Wave length	950 nm			
	Frequency range	0–10 Hz			
	Application	calf			
Photo-Plethysmography (PPG)	Channels	2			VasoScreen® 4000
	Wave length	950 nm			
	Frequency range	0.2–25 Hz			
	Application	fingers, toes			
Pneumatic Module		in combination with VasoScreen® 4000	in combination with VasoScreen® 4000	40–260 mmHg 4 cuffs	0–299 mmHg 2 cuffs
Interface		USB 2.0	USB 2.0	USB 2.0	USB 2.0
Power Supply		100–240 V AC 50 / 60 Hz, < 40 VA	USB driven device	100–240 V AC 50 / 60 Hz, < 40 VA	230 V AC 50 Hz, < 50 VA
Dimensions	w × h × d	310 × 260 × 85 mm	140 × 65 × 35 mm	310 × 260 × 85 mm	310 × 260 × 135 mm
Weight		approx. 2.0 kg	approx. 0.3 kg	approx. 2.0 kg	approx. 4.0 kg
Electrical safety	MDD	Class II a	Class II a	Class II a	Class II a
	Insulation	Class I, Type BF, 4 kV	Class II, Type BF, 4 kV	Class I, Type BF, 4 kV	Class I, Type BF, 4 kV
	Standards	EN 60 601-1 EN 55011 Class B	EN 60 601-1 EN 55011 Class B	EN 60 601-1 EN 55011 Class B	EN 60 601-1 EN 55011 Class B
	Notified Body	CE 0197	CE 0197	CE 0197	CE 0197
PC Requirements	Computer	medical standard	medical standard	medical standard	medical standard
	Operating system	MS Windows	MS Windows	MS Windows	MS Windows
	RAM	> 1 GB	> 1 GB	> 1 GB	> 1 GB
	HDD	> 60 GB	> 60 GB	> 60 GB	> 60 GB
	Interface	USB 2.0	USB 2.0	USB 2.0	USB 2.0

AUTHORISED DISTRIBUTOR

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